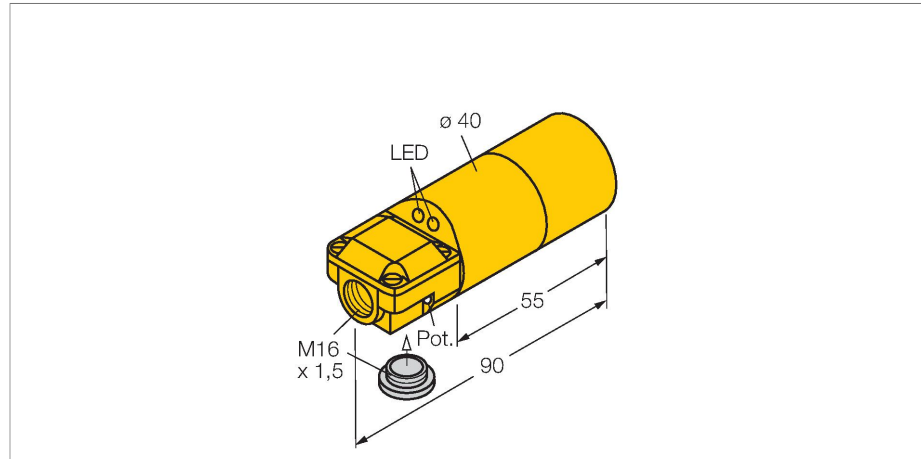


# BC20-K40SR-VP4X2

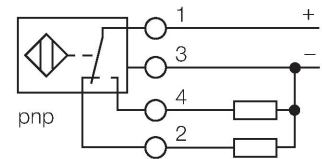
## Capacitive Sensor



### Features

- 2 cable entries (axial, radial)
- Smooth barrel, Ø 40 mm
- Plastic, ABS
- Fine adjustment via potentiometer
- DC 4-wire, 10...65 VDC
- Complementary contact, PNP output
- Terminal chamber

### Wiring diagram



### Functional principle

Capacitive proximity switches are designed for non-contact and wear-free detection of electrically conductive as well as non-conductive metal objects.

### Technical data

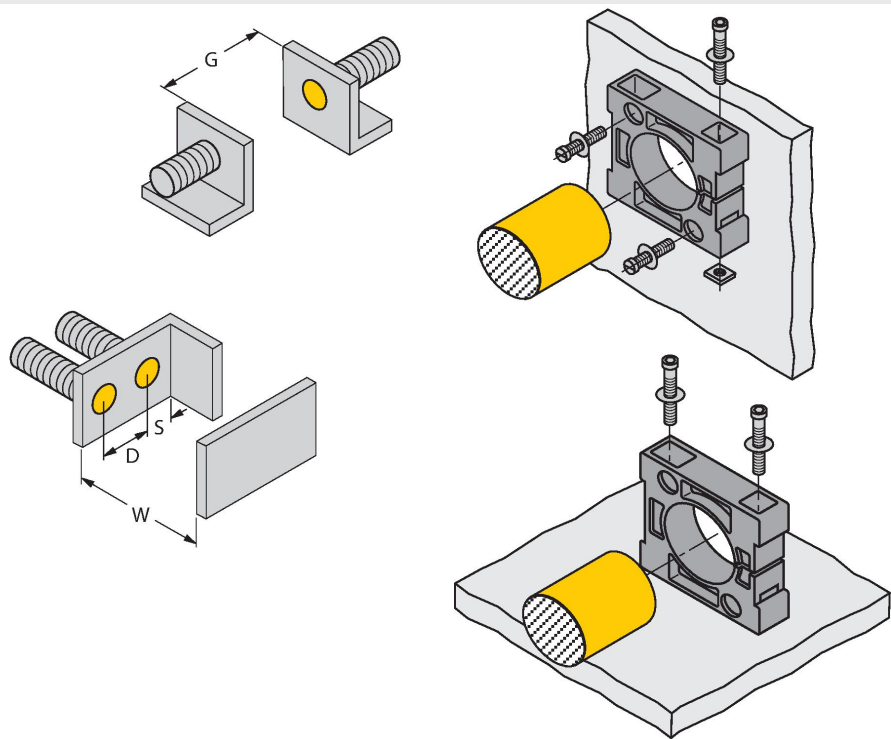
|                                        |                                                           |
|----------------------------------------|-----------------------------------------------------------|
| Type                                   | BC20-K40SR-VP4X2                                          |
| ID                                     | 25100                                                     |
| Rated switching distance (flush)       | 20 mm                                                     |
| Rated switching distance (non-flush)   | 30 mm                                                     |
| Secured operating distance             | $\leq (0.72 \times S_n)$ mm                               |
| Hysteresis                             | 1...20 %                                                  |
| Temperature drift                      | Typical 20 %                                              |
| Repeat accuracy                        | $\leq 2$ % of full scale                                  |
| Ambient temperature                    | -25...+70 °C                                              |
| <b>Electrical data</b>                 |                                                           |
| Operating voltage $U_b$                | 65 VDC                                                    |
| Ripple $U_{rs}$                        | $\leq 10$ % $U_{Bmax}$                                    |
| DC rated operating current $I_o$       | $\leq 200$ mA                                             |
| No-load current                        | $\leq 15$ mA                                              |
| Residual current                       | $\leq 0.1$ mA                                             |
| Switching frequency                    | 0.1 kHz                                                   |
| Oscillation frequency                  | According to EN 60947-5-2, 8.2.6.2 Table 9: 0.1...2.0 MHz |
| Isolation test voltage                 | 0.5 kV                                                    |
| Output function                        | 4-wire, Complementary contact, PNP                        |
| Short-circuit protection               | yes/Cyclic                                                |
| Voltage drop at $I_o$                  | $\leq 1.8$ V                                              |
| Wire break/reverse polarity protection | yes/Complete                                              |

## Technical data

| Tests/approvals        |                                            |
|------------------------|--------------------------------------------|
| Approvals              | UL                                         |
| UL registration number | E210608                                    |
| Mechanical data        |                                            |
| Design                 | Smooth barrel, 40 mm                       |
| Dimensions             | 90 mm                                      |
| Housing material       | Plastic, ABS                               |
| Active area material   | ABS                                        |
| Electrical connection  | Terminal chamber                           |
| Clamping ability       | ≤ 2.5 mm <sup>2</sup>                      |
| Vibration resistance   | 55 Hz (1 mm)                               |
| Shock resistance       | 30 g (11 ms)                               |
| Protection class       | IP67                                       |
| MTTF                   | 1080 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication    | LED, Green                                 |
| Switching state        | LED, Yellow                                |
| Included in delivery   | BS40, cable gland, blanking plug           |

## Mounting instructions

Product features



|                        |         |
|------------------------|---------|
| Distance D             | 40 mm   |
| Distance W             | 60 mm   |
| Distance S             | 60 mm   |
| Distance G             | 120 mm  |
| Diameter active area B | Ø 40 mm |

The given minimum distances have been checked in compliance with the standard switching distance.  
Should the sensitivity of the sensors be changed via potentiometer, the data sheet specifications no longer apply.